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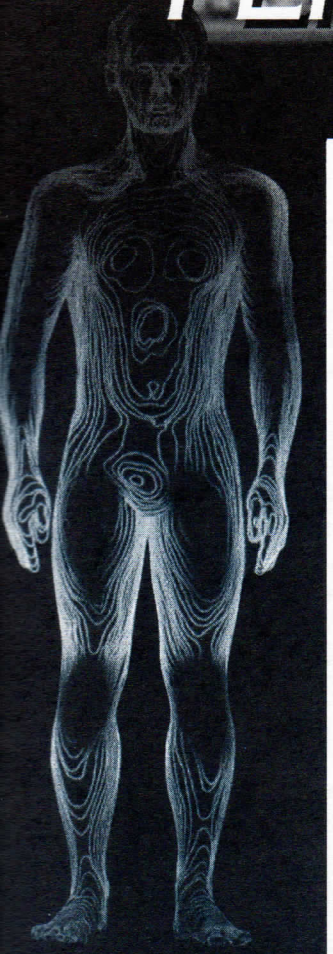
Flight Physician - January, 2004

Civil Aviation Medical Association

FLIGHT PHYSICIAN

A Publication of the Civil Aviation Medical Association

Volume 7, Number 1 January 2004



In This Issue

Nutrition, Obesity, and Aviation Medicine, Part I

Overweight and obesity cause more chronic illness than poverty, tobacco, and alcohol combined; yet overweight and obesity receive far less attention and funding. Part 1 of this three-part series discusses the health consequences of overweight and obesity. Part II will discuss the non-medical interventions, and Part III will explore the medical and surgical options for the treatment of obesity.

By David Bryman, D.O.

I am fortunate to have a busy aviation medical practice and recently noticed an increase in the number of aviators that require assistance in obtaining their FAA medicals due to a variety of overweight and obesity-related, co-morbid medical conditions. The result is also an increased need to involve Oklahoma City in the process of obtaining special issuance.

These co-morbid conditions include a diagnosis of hypertension, diabetes, sleep apnea, hyperlipidemia, arthritis exacerbation, and cardiovascular diseases, among many others. The increase in these conditions is obviously a result of the fact that more and more pilots are becoming obese and overweight. This trend is not unique in the pilot population, but it is reflective of the general population in the USA. More than 55% of the population in the United States is overweight, and more than 25% of these are obese. We are the heaviest society on the planet and growing at an alarming rate.

Obesity rates are projected to double over the next 30 years: according to *JAMA* (Jan 01, 2003) Colorado is the thinnest state in the country with 14.4% of the population obese. Mississippi is the heaviest, with an obesity rate at an amazing 25.9%. My home state of Arizona weighs in at 17.9%.

There are far more overweight and obese Americans than there are smokers or problem drinkers. **Overweight and obesity cause more chronic illness than poverty, tobacco, and alcohol combined; yet overweight and obesity receive far less attention and funding.**

According to C. Everett Koop, M.D., in the 1990s "Obesity is the # 2 preventable killer second only to smoking!" In 2001, obesity passed smoking and is now considered the

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CAMA 2004 Meetings at a Glance

February 21	CAMA Board Meeting DFW Embassy Suites Hotel South
May 1	Airline Medical Directors Meeting Anchorage, Alaska
May 2	CAMA Sunday Anchorage, Alaska
May 2 – 6	AsMA Annual Meeting Anchorage, Alaska
May 3	CAMA Luncheon Anchorage, Alaska
October 7-10	CAMA Annual Session Omaha, Nebraska

THE CAMA FUTURE – LOOKING AHEAD

International Civil Aviation Medicine Maturing Through CAMA Leadership

BY JAMES R. ALMAND, M.D.

THE WORLD'S CIVIL AVIATION medical community has no other unified voice than the Civil Aviation Medical Association.

Universal aviation medicine leadership is visible clearly in CAMA's Bulletin/Journal, meetings, and public statements. International, authorative aviation medicine meetings are highly respected and attended by worldwide leaders in the field. The most recent international CAMA annual meeting in October 2002 in Amsterdam had a registration of 27 different countries, and aviation medical specialists from around the world emphasized the notable restatement of CAMA's mission of international civil aviation medicine.

Your new CAMA Editor, Dr. David Bryman, has begun in this issue a very ambitious and commendable series of three articles on the US health picture as it pertains to cardiovascular, diabetes, and dietary interrelations. This challenging subject is of acute concern in all physicians' offices and is accentuated by the critical impact of the marked increased incidence of diabetes in the US population.

The field of bariatrics is one of growing interests in medicine, as its application becomes of increasing importance in the problematic management of the US population – fifty percent of which is considered obese. I hope that Dr. Bryman's series of three articles will lead us to a better control of our obese patient.

It is also with pleasure that CAMA now has two additional co-editors of your Bulletin – Journal. This quartet of Editors — Dr. David Bryman, Dr. Ingrid Zeller-Galler, Dr. Petra Illig, and Dr. Alex Wolbrink — will be key players in continuing the growth and development of this publication. The aim is to bring you concise, practical, and challenging editions to better us all in our practice of aviation medicine. As in the past, your editors have tried to make the "CAMA Bulletin" a far-reaching digest of current international practical aviation medicine for all flight surgeons.

All members of CAMA are urged to submit guest articles in the general field of Aviation Medicine. All submissions should be sent to Dr. Bryman at:

flydoc85d@aol.com.

Your authors have continued to do a monumental task to make your Bulletin a continuing success. The field of civil aviation medicine is continuing to thrive and build on its future. Special thanks to all who have contributed to the CAMA success. Your editors of today deserve our continuing appreciation.

FP

SILENT WEAPON STRATEGIES: DOVES VS. HAWKS

Is our homeland defense system made of Hawks or Doves?

BY JAMES R. ALMAND, MD

A SIGNIFICANT DIVISION of medical opinion exists surrounding the smallpox vaccination issue. Variations in immunization plans have emerged from many medical and governmental authorities in the past year. Even the Centers for Disease Control and Prevention (CDC) has failed to develop a steadfast advisory for countering a potential bioterrorist attack in the United States. Searching for a consensus approach continues, with conflicting "Dove vs. Hawk" reviews of the risks and benefits of smallpox vaccinations.

A chilling and stark simulated smallpox exercise, staged by U.S. bioterrorism experts and shown by the BBC (*Smallpox 2002: Silent Weapon*), developed an alarming docudrama in New York City resulting in 60 million dead.

Another planned exercise, *Dark Winter*, followed in June 2001. This study, organized by Johns Hopkins University as a computerized epidemic model of smallpox, was effective in revealing "gaps in the country's biodefense system and to jolt policy makers into action." The *Dark Winter* exercise found severe weaknesses in the U.S. bioterrorism protection program.

Medical and scientific articles on bioterrorism and smallpox have markedly increased since September 11. The only consensus is in the agreement of the severity of smallpox infection. A significant divergence of "Dove vs. Hawk" immunization theories thus occurs. The CDC's "ring vaccination" strategy

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The editors of *Flight*Physician welcome submission of articles, letters to the editor, news bits, interesting aeromedical cases, and photos for publication. Please mail text in typewritten form or on floppy disk (Microsoft Word preferred) to:

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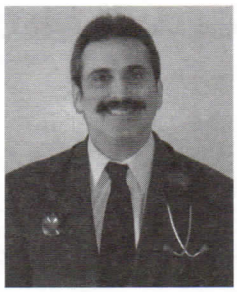
FROM THE EDITOR



David Bryman, D.O.

I WOULD LIKE TO TAKE THIS opportunity to welcome our new members to CAMA, the Civil Aviation Medical Association.

CAMA is dedicated to civil aviation safety, and to the advancement of scientific knowledge in civil aviation through continuing education. CAMA is dedicated to promoting the best methodology for the assessment of civil aviators and binding together civil aviation physicians to promote flight safety. CAMA provides and promotes a fellowship among physicians with similar interests of aviation and flight safety, and serves to represent civil aviation physicians before government, the aviation industry, and the public. The organization has been recognized as the "voice of civil aviation medicine."

As physicians, we all belong to many medical organizations. For some of us the yearly dues and memberships are mandatory to maintain licenses in the state we live. With decreasing reimbursements and higher overheads, we are forced to become more selective in the organizations in which we participate. I would like you to consider CAMA as a medical organization worthy of renewed membership.

Over the past 17 years, I have belonged to so many medical organizations that I can't even remember them all. As a triple board-certified physician, I am still "forced" to join many medical groups that I think benefit me very little.

Many of our physician members are AMEs and pilots. Many members just enjoy the vast and changing field of aviation as a hobby or escape from the daily grind. As AMEs, we have the unique opportunity to combine our interest in medicine with our love of aviation. If you're looking for fellowship, aeromedical education, interesting and fun destinations that combine aviation and medicine, then CAMA is the organization for you.

In the last few years, we have traveled to Toronto, Atlanta, Memphis, Amsterdam, and most recently, to Seattle. Each trip has included aviation activities such as our recent visit to the Boeing Plant in Seattle. Our lectures are given by the top physicians in Aviation medicine. They are stimulating, educational, and relevant to our practice of medicine. Our yearly seminar takes place in the beginning of October.

In addition to this seminar, CAMA will have a one-day meeting in conjunction with the Aerospace Medical Association this coming May in Anchorage, Alaska. I highly recommend this one-day meeting that we call "CAMA Sunday."

Many of the lectures presented will highlight the recent CAMA scientific meeting, as well as relevant topics in aviation medicine, and will prove to be educational and enjoyable.

The first year's membership to CAMA is free to newly appointed AMEs because we are confident that once a physician receives a Bulletin and attends one of our meetings, they will likely continue their membership. I invite all of our new members to attend the yearly CAMA educational seminars, as well as CAMA Sunday, and to become more involved with the organization. I also welcome articles that can be submitted for publication in the CAMA Bulletin. Please E-mail them to me at:

flydoc85d@msn.com.

I wish all our members a happy, healthy, and prosperous New Year.

FP

THOUGHTS ON TODAY'S MEDICAL ETHICS, PROFESSIONALISM, AND THE FUTURE

BY JAMES R. ALMAND, M.D.

THE PHYSICIAN-HEALER CONCEPT began centuries ago with the ancient Greeks. Today's medical professionals are honored to mentally review their oath of Hippocrates in respect of the strong ethical bond of their science.

Professionalism among physicians in the last century has endured attacks from both inside the profession and outside the honored field. An example is the current resultant division among the ranks of previously cohesive, well-organized doctors that has now fostered the lowest membership percentages ever in today's only voice of organized medicine, the American Medical Association.

What is undermining physician unity and weakening the professions position of ethical strength?

- Lowering of social and family structuring
- Weakening of society's moral fabric
- "Bending" of society's rules of guidance in medical ethics, with legal adverse impact (e.g., drugs, abortion, alcohol, tobacco, homosexuality, religion)
- Inclusion and certification of non-physicians in para medical fields
- HMO impact in promoting financial reward to physicians, creating an underlying feeling of physician competitive jealousy
- Reduction of high levels of admission criteria for medical school applicants
- Failure to respect and follow the oath of Hippocrates after graduation

Certainly, other factors affect the ethics of today's medical field and alter the cohesion of the profession. Positive debate is welcome, but should divisiveness be the only answer? Could a more successful path be available to counter the apathy weakening today's cohesive strength of medicine?

The resolute response of United States physicians to the September 11, 2001, disaster of terrorism is an impressive example of the deep union binding the medical profession. Should this strength in union fail, ethics and professionalism in medicine will return to the darkness of the middle ages.

Leadership in medicine must be stronger and more positive, and directive to the entire membership of physicians. Inside and outside undermining influences will demand anticipation and removal, to restore and protect the time honored cohesiveness of medicine of Hippocrates.

The future physician's knowledge and diagnostic skill will be essential to the control of emerging developing diseases. Genetic and other future research will open new doors in preventive medicine. Antibiotics, vaccinations, pills, shots, and medications will eventually retire today's medical science into the "middle ages" of medicine, adding them to the chapter of Dampier's *History of Science*.

The anticipation and prevention of diseases in future medicine will establish a higher standard for ethical professionalism to follow. The key to this goal is the challenge to medical leadership of today.

FP

WRITERS NEEDED

The CAMA *FlightPhysician* is geared to rapidly communicate new standards and advancements in civil aviation medicine and is the speaker for the civil aviation medicine flight surgeon. Your editorial staff is committed to providing you with the most current and advanced information to benefit your aviation medicine practice.

Your new CAMA Bulletin editor, Dr. David Bryman, is anxious to be responsive to your needs and inputs. Your comments, articles, and suggestions are encouraged. Only with you, CAMA's membership of civil aviation medicine's leaders, can your Bulletin continue to be the best educational tool for the Civil Aviation Medical Physician. Dr. Bryman's E-mail address is:

FlyDoc85D@msn.com

Freedom Isn't Free

I watched the flag pass by one day,
It fluttered in the breeze.
A young Marine saluted it,
And then he stood at ease.
I looked at him in uniform
So young, so tall, so proud,
With hair cut square and eyes alert
He'd stand out in any crowd.
I thought how many men like him
Had fallen through the years.
How many died on foreign soil
How many mothers' tears?
How many pilots' planes shot down?
How many died at sea
How many foxholes were soldiers'
graves?
No, freedom isn't free.
I heard the sound of Taps one night,
When everything was still,
I listened to the bugler play
And felt a sudden chill.
I wondered just how many times
That Taps had meant "Amen,"
When a flag had draped a coffin.
Of a brother or a friend.

I thought of all the children,
Of the mothers and the wives,
Of fathers, sons and husbands
With interrupted lives.
I thought about a graveyard
At the bottom of the sea
Of unmarked graves in Arlington.
No, freedom isn't free.

Enjoy Your Freedom & God Bless Our Troops

NUTRITION from page 1

primary preventable killer in America.

The health implications of obesity are staggering: $99.2 billion spent in 1995 due to obesity. Obesity cost the nation $117 billion dollars in 2000 alone, and much more in the last year. The incidence of obesity has changed from 12.8% in 1960, to 25% in 2000.

The degree of overweight and obesity is commonly measured by one's body mass index. This number describes relative weight for height: weight (kg)/height (m^2). It is useful in predicting morbidity and mortality. For example, if one's BMI is greater than 30, life expectancy may be affected up to 30%.

There are limitations to using BMI. For example, it does not account for lean body mass; therefore, a very muscular person could have an artificially elevated BMI. When looking at BMI, it is important to consider lean body mass, fat percentage, and total body water.

A "normal" BMI is less than 25. One is considered overweight if the BMI is between 25 and 30, and obese if the BMI is over 30. The lowest mortality rates are for those with a BMI of 20 - 25. Mortality begins to increase modestly with a BMI over 25. With a BMI of 30 or above, mortality rates for all causes increase by 50 – 100%. The most frequent cause of death in obese individuals is cardiac disease.

Morbidity increases for the following conditions as the BMI rises above 20: hypertension, type-2 diabetes, dyslipidemia, coronary heart disease, congestive heart failure, stroke, gallbladder disease, hyperuricemia/gout, osteoarthritis, complications with pregnancy, respiratory problems, cancers of the endometrium, breast, prostate, and colon. Other associated illnesses include sleep apnea, infertility / menstrual irregularities, hirsutism, stress incontinence, and psychological disorders including depression.

Weight gain is directly related to these cardiovascular risk factors: dyslipidemia hypertension, elevated insulin, fibrinogen, and increased plasminogen activator inhibitor-1, causing impaired fibrinolysis.

An increase in BMI of 1 unit (about 5 lbs of body fat) increases risk of coronary events by 10%; the converse a 1% reduction in cholesterol will cause a 2% reduction in CAD, according to the Framingham study. A body mass index of less than 22 is highly desirable for the prevention of heart disease.

Obesity is directly related to hypertension. In clinical practice, a weight loss of only 11 lbs lowers BP as well as a medication. Also, a 22 lb weight loss will likely be enough to discontinue anti-hypertension medication in most patients.

Obesity causes hypertension by a complex and multi-system interaction. There is enhanced sodium retention, vascular smooth muscle hypertrophy, increased intracellular calcium, stimulation of renin-angiotensin-aldosterone system, and an increased activation of sympathetic nervous system. Obesity also causes left ventricular hypertrophy and can frequently lead to congestive heart failure. Obesity cardiomyopathy is a well-recognized complication of obesity. Overweight and obesity are associated with ischemic stroke, but not hemorrhagic stroke.

The following is a quote from the Virtual Pilots Web Page: "Many pilots are distressed when they notice that their own center of gravity is moving considerably further forward than it was when they were just learning to fly. The consequences of pilots reaching a weight they consider gross can be just as hazardous as trying to fly an aircraft that exceeds its gross weight. When pilots can no longer see their own 'landing gear' because of the tire around their 'fuselage,' they look for medical maintenance personnel or decide to perform their own annual inspection and maintenance."

In regards to flying, an obese pilot has greater risk of becoming incapacitated by his co-morbid conditions than a non-obese pilot. As physicians and AMEs, we must be diligent in diagnosing and treating conditions such as diabetes, hypertension, sleep apnea, and cardiovascular diseases in our overweight and obese pilots. Also, we should be aware that obesity increases the risks of developing deep venous thrombosis and is an important risk for the development of decompression sickness in a non pressurized aircraft. We need to have a higher index of suspicion in these folks.

In the next two articles, I will discuss treatment options and discuss how certain foods can affect appetite and satiety.

Dr. David Bryman is a board-certified Bariatrician. He is a member of the American Society of Bariatric Physicians and serves on the Board of trustees for the American Board of Bariatric Medicine.

FP

FROM THE FLIGHT LINE

BIRDS OF A FEATHER: HELP FOR THE PILOT WITH SUBSTANCE ABUSE

The fear of loss or limitation to a pilot's career because of this misunderstood disease has been a very real concern to pilots, and the understanding of those concerns to be found at Birds *is priceless. The setting has contributed to the recovery of pilots, and the spirit of passing this philosophy on to others who also might benefit is the reason for Birds of a Feather.*

BY CAPT. SCOTT HEIN

IT SEEMS LIKE WE are seeing it happen more and more frequently. The news program showing the pilots being escorted across the parking lot, hiding their faces, as the announcer tells us of yet another alcohol-related airline incident with airline pilots as the culprits. Is this a new trend or just a consequence of heightened awareness on the part of airline security screeners, managers, and passengers?

Perhaps the question should be, "Why aren't we seeing even more of these kinds of incidents?" After all, there is no reason to believe that airline pilots are any different from the general population when it comes to the percentage dependent on alcohol, generally stated these days as around 10 to 12%. I believe the answer to this question is that pilots these days are well attuned to the extraordinary scrutiny being afforded to them, and they subsequently plan their consumption of alcohol to be within the rules set out by the FAA (8 hours prior to duty) and the various airlines themselves (generally 12 hours before duty). However, what about those crewmembers that are unable to effectively control their consumption of alcohol? I'm talking about the true, alcohol-dependent airman—the pilot suffering from the disease of alcoholism.

So what do you, the Aviation Medical Examiner, have to be aware of? Depending on the alcohol-abuse education you received in medical school, the seminars, and follow-on training you may have received about alcoholism in our society, do you have a game plan when you become aware of a pilot sitting on your examination table who has an enlarged liver, high blood pressure, a suspect blood profile, and liver enzymes off the chart?

I am not here to comment or recommend the course of action you would take in this situation. I am just a layperson when it comes to the decisions of doctors. I may be familiar with some of the protocol you must go through if your examinee appears to have alcohol dependence but not all of it. I can, however, tell you of an organization that you can refer your pilot to, should he want help.

The organization I am referring to is *Birds of a Feather International.* Birds of a Feather is, basically, a self-help group for pilots and cockpit crewmembers that are active or inactive in the private, commercial, or military fields of aviation. Its principles are based on a well-known organization that had its own start way back in 1935. *Birds* was formed in 1975 in response to the need for a meeting place for pilots where the subjects of addiction to alcohol or drugs might be discussed with impunity and anonymity. The cultural bias concerning these subjects has prevented many pilots in the past from seeking advice in this area. Birds of a Feather addresses, in an atmosphere of support, that its members are alcoholic themselves and have a means whereby productive lives in their chosen profession can be maintained.

Birds of a Feather has no loyalty to any company, EAP, treatment center, medical program, the FAA, or the airline HIMS program. The fear of loss or limitation to a pilot's career because of this misunderstood disease has been a very real concern to pilots, and the understanding of those concerns to be found at *Birds* is priceless. The setting has contributed to the recovery of pilots, and the spirit of passing this philosophy on to others who also might benefit is the reason for Birds of a Feather.

There are many "Nests" of Birds of a Feather across the U.S. and in a few European countries. These Nests hold weekly meetings that are attended by any pilot who would like support. In the cases where a major city does not have a regularly scheduled meeting, there are "solo" Birds in those cities that are available to take calls to offer support. A convention is held each year for all the Nests where everyone gets together for fellowship, business meetings, self-help support group meetings, and a banquet.

I feel honored and privileged to have been given the opportunity to tell you a little about Birds of a

Continued →

THE SAFETY RECORD OF OLDER DRIVERS

The subject of the age-sixty airline pilot is to be addressed May 2, 2004 at the CAMA Sunday program in Anchorage, Alaska. Somewhat pertinent to this subject is the following article by the editor of the Baylor University Medical Center Journal. The rapidly escalating geriatric population in the US should enjoy sharing this issue with you.

BY WILLIAM CLIFFORD ROBERTS, MD

DR. FAIN FROM TUCSON, Arizona, recently published a beautiful editorial entitled, "Should older drivers have to prove that they are able to drive?" This question itself presumes certain truths: 1) the older driver is an unsafe driver; 2) the proportion of older drivers on the road will continue to dramatically increase; 3) the unsafe older driver can be accurately predicted through valid screening tools and test; 4) public policy that targets and restricts older drivers as a group is beneficial to society as a whole. She then asked how accurate these four presumptions were.

The older driver is much less likely to be involved in a motor vehicle crash than a driver from any other age group and statistically presents a lesser danger on the road than the younger driver! The number of drivers involved in motor vehicle crashes declines steadily from age 20 years. Indeed, most crashes and fatalities involve men less than 25 years of age, not older drivers.

Statistically, renewing the license of a 70-year-old male driver for another year poses, on average, 40% less threat to other road users than renewing the license of a 40-year-old male driver. Older drivers, aware of their limitations, tend to drive far fewer miles and avoid driving at night, in heavy traffic, or in bad weather. Another way to look at driver safety involves statistically adjusting the rate of crashes and/or fatalities by miles driven. For the older driver, however, especially more that 75 years of age, the rate of crashes and/or fatalities per mile driven is higher, approaching the higher crash and fatality rate of the younger driver. These per-mile driven statistics have received disproportional attention, according to Fain, even though the absolute number of crashes and fatalities per older driver represents a small proportion of such events for all drivers.

Efforts to predict crash risk based on advanced age, medical problems, or medication profiles have been largely unsuccessful. Limited associations between certain visual impairments and crashes have been found in several studies.

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Feather. There is more information available to you, much more than could be written in this article. I would like to refer you to our Web site (www.boaf.org) where you can find a complete history of BOAF to include how it impacted the beginnings of the airline HIMS program for returning rehabilitated airline pilots back to the cockpit. The site has information about Nests in cities worldwide, phone numbers of trusted individuals to contact who will always maintain anonymity of the person calling, plus information on how to subscribe to *The Bird Word*, our quarterly newsletter with articles, letters, and information for the pilot interested in turning his life around from this debilitating disease.

My mission on writing this article would be complete if each Aviation Medical Examiner reading this would at least place the Web site address in a location in his office where he could refer a patient to it. If just one pilot would access the site, call for help, or subscribe to *The Bird Word*, then I believe my time spent writing this information for you and the time you have spent reading it will have been worthwhile. Perhaps it may prevent another pilot from the pain of seeing himself on CNN dodging the media because he had an alcohol-related incident while on duty and then having to suffer the unfortunate circumstances that occur afterwards.

The author is a captain for a major U.S. airline and is a volunteer involved with substance abuse recovery programs for pilots. He works closely with union committees, airline management, and is familiar with Federal Aviation Administration procedures for returning pilots to the cockpit upon successful rehabilitation from substance abuse. He has been associated with Birds of a Feather for the past 13 years.

FP

CIVIL AVIATION MEDICAL ASSOCIATION

Sustaining and Corporate Members

The financial resources of individual members alone cannot sustain the Association's pursuit of its broad goals and objectives. Its forty-six year history is documented by innumerable contributions toward aviation health and safety that have become a daily expectation by airline passengers worldwide. Support from private and commercial sources is essential for CAMA to provide one of its most important functions: that of education. The following support CAMA through corporate and sustaining memberships:

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Thank You For Supporting the Civil Aviation Medical Association.

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Only weak association have been found between crash risk and older persons with cardiac disease, diabetes mellitus, sleep apnea, arthritis, history of falls, Parkinson disease, foot abnormalities, or stroke. Ingestion of certain substances and medications, such as alcohol, sedative hypnotic agents, and psychotropics, is known to increase crash risk; these risks, however, apply to drivers of all ages. Older drivers' greater experience and their risk reduction behaviors (driving more slowly and avoiding congested roadways) appear to compensate for most age-related declines. Clear standards or guidelines for accessing driving competence have not yet been developed or validated for the older driver.

The automobile is a powerful tool of independence and provides freedom through mobility for all Americans, especially the elderly. Most Americans, including the older ones, are dependent on their cars for their transportation needs, including medical visits, shopping, attendance at religious services, and socialization. Driving cessation is a devastating event and results in a loss of freedom and a loss of individual autonomy. Decisions to revoke an older person's driving privileges should be based on clear, predictable danger to others. The burden of the dramatic loss of freedom should be weighed against any potential benefits of improved motor vehicle safety. Rather than attempting to curtail the older driver's privileges, society might look for ways to maintain the older driver's safe mobility. Although driving is a privilege conferred by the state, physicians have a shared responsibility to balance the needs of their individual patients with the good of society. Dr. Fain recommends that physicians take a driving history in patients, assess their physical or mental impairments that might adversely affect their driving abilities, recommend therapy that might eliminate the impairment, and/or suggest a change in driving patterns to minimize risk.

FP

CAMA CONSULTANTS

To our new members and as a reminder to all: This is a list of more experienced AMEs that have volunteered to help with troublesome certification cases. For involved questions, E-mail or fax is preferred. This list is NOT for use by airmen, but solely for AMEs within the CAMA membership.

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WEAPONS from page 2

evolved, to be employed only during a proven smallpox epidemic. Following this, "smallpox response teams" were encouraged, again to be deployed only in a proven outbreak. More recently, the CDC proposed "mass vaccination in 72 hours," though only in the event of a smallpox outbreak — somewhat an enlargement of the "ring vaccination" concept. As yet, no plan is emerging for immunizing physicians and other medical vaccination teams.

Now evolves a unique idea: Make the vaccine available today to any person who wants it. Unique. Sensible. American. Medically reasonable. An established, tried, efficient, and proven vaccination theory.

Now that the dust has settled, how can physicians protect a population for 10 years from any potential epidemic that today is unimaginable? Can any local population be inoculated within 72 hours by physicians and paramedical staff, under a safe and controlled environment following the threat of a smallpox epidemic? Imagine a scenario for one case of any highly contagious disease with ease of spread and limited controllability (i.e., smallpox, plague, anthrax, or West Nile virus). Add to this a bit of public knowledge of the contagious disease, the potential for spread, the media manipulation, the risks of the disease, and the potential for rapid population decimation by the illness, and we are faced with a volatile situation.

To control such a scenario, the initial step would be in identifying the problem. Next, we need to ascertain the scope and extent of the problem in the U.S. Once this has been established, the medical establishment needs to make sure that the population is protected.

Consider an acute exposure of smallpox in an area such as the DFW airport, planted by radicals or brought to the area by a tourist or terrorist infected by the disease. On reaching the arrival gate at DFW airport, the decisive rash of smallpox is full-blown and on U.S. soil. All the passengers on the flight are prime contacts due to the high virulence of the virus. On departing the flight, customs, baggage, and airport personnel are all exposed to this virus. What is the DFW airport, or state, or national established policy to any similar bioterrorist attack on the U.S.?

Can any unprotected population be protected, and if so, how, by whom, when and by what? What immunization rate can be guaranteed for the immunization teams? Can physician and ancillary teams be protected to perform their duties? Can any federal or municipal organization foresee and manage multitudes of citizens, all demanding immediate immunization protection? If able to do so, under what protective umbrella would the medical staff operate?

Each immunized recipient must release the government, state, city, (and physicians) from all legal/medical complications associated with the vaccine. Protection of medical personnel and basic crowd control from threat or attempted physical violence from citizens must be available.

Epidemiologic studies and plotting of the disease progression, its etiology, severity, quarantine effectiveness, response to drugs used (or other vaccine attempts for control) must be in place. Laboratory testing by local, state, or CDC national resources must be employed, but experience with U.S. anthrax attacks in 2001 or prior terrorist gas attacks in Japan exceeded rapid diagnostic testing capabilities.

The tracking of an emergent critical disease (of any type) throughout a populace will demand coordination of local, state, and national authorities — if they are available in the early communicable stage. Any human disease assessment of a critical, contagious potential must be considered imperatively impacted by available medical facilities and staff to accommodate the possible casualties. Planned assessment of bed space, emergency rooms, drugs, contagion protection, medications, ancillary staff, and skilled physicians to manage and direct a potential massive human influx of critically ill population is vital.

Sad as it is, today's global population is poorly protected against an attack of similar contagious character such as the above contingencies — be they newer chemical or biological warfare of any sort (e.g., Ebola or even a new strain of TB.).

What plan should now already be in place to protect the U.S. population from smallpox? The populace deserves a full knowledge of all information. After this understanding, a program for smallpox universal vaccination should be urged. The U.S. stockpile of vaccine is now sufficient to cover the entire U.S. population. The consequences of population hysteria demanding immediate mass immunization protection far outweighs any risk of a planned controlled vaccination program.

The United States public health and medical community should develop a unified advisory on smallpox vaccination, based on risk/benefit conclusions and tempered by bioterrorism risk assessments. Widespread voluntary mass vaccination, even with its risks, should be a primary public health bioterrorism protection conclusion.

Is our homeland defense system made of Hawks or Doves? Will a bioterrorism Hawk catch our Doves? The last act crowns the play.

FP

THE PHYSICIAN PILOT

"A Volunteer's Perspective"

BY DAVID BRYMAN, D.O.
FLYING SAMARITAN

Patients waiting outside the Mulege Free Clinic to be seen

MANY OF US are members of CAMA because we have been fortunate enough to combine our love of aviation with our dedication to the advancement of our medical knowledge in Aviation Medicine. In CAMA, we can find the common bond as physician pilots to share our aviation experiences and develop fellowship with our colleagues.

Besides CAMA, there have been other avenues of interest that has allowed me to utilize my skills and interests as a physician-aviator. The most rewarding of these has been serving underprivileged people as a volunteer.

I have been involved with many charitable organizations over the years. Besides playing guitar with my charity band, comprised of seven doctors called "The Rockin' Docs" (I know, *don't quit your day job*), I have had the pleasure of serving as Arizona's former wing leader for Angel Flight West, a volunteer pilot group that transports financially needy patients for medical care.

A typical Angel Flight mission would involve taking a patient from a remote underprivileged area of Arizona or California to a regional city center such as Phoenix or Tucson for chemotherapy or other medical therapeutic interventions. We also transported blood and other products to help patients. Angel Flight West is now known as Angel Flight America, and has hundreds of pilot volunteers who fly thousands of missions per year.

Similar organizations exist such as Flights For Life, Volunteer Pilots Association, and many others.

The group that I am now involved with is called *The Flying Samaritans* — http://flyingsamaritans.com/

I am more excited about the work that this group does than any other charity I have ever participated with.

The Flying Samaritans is a volunteer, nonsectarian, health-oriented organization serving and working with the medical and dental personnel in remote areas of Baja California, Mexico, to help supplement medical care for the local populations.

The Flying Samaritans is a not-for-profit organization with no political affiliations. Started in 1961, the organization has grown to include ten chapters that operate approximately 20 clinics in Baja Mexico. The Los Amigos Chapter, based in the Phoenix, Arizona, area, was formed in 1991. Currently, the Los Amigos Chapter is providing medical and dental care in Baja California Sur, Mexico, at Adolph Lopez Mateos and Las Barrancas.

The Flying Samaritans relies totally on volunteer participation. We currently use medical physicians, dentists, dental hygienists, physician's assistants, nurse practitioners, chiropractors, pharmacists, interpreters, pilots, and helpers.

Since 1990, membership in the Los Amigos Chapter has grown from seven to over 100 volunteers. Golf tournaments, original dinner theater productions, and personal donations have helped raise the necessary funds to add additional dental units, dental equipment, medications, and other supplies needed to make the clinics run more efficiently.

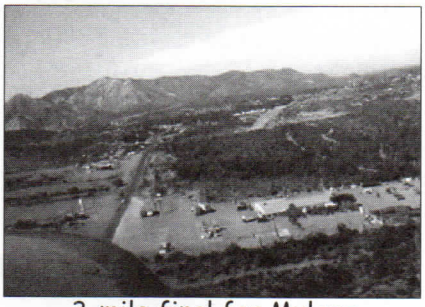
The Phoenix-based chapter travels to Baja ten months out of the year, providing general medical, dental, and chiropractic care for 75-150 patients each month. Occasionally, patients with serious ailments that cannot be treated locally have been transported to the U.S. or elsewhere in Mexico for specialized care.

On the January trip last weekend we left Scottsdale at 0700 on Friday for a 3.5 hour trip to our first stop in Guaymas, Mexico, to refuel and clear Mexican customs. I was flying my Piper Warrior (PA-161). The air was cool and smooth. My passengers included my 17 y/o daughter, Shanna, who went as both a Spanish translator and my co-pilot. Shanna is about to take her Private pilot check ride in March and loves to fly. My other passenger was a lovely, kind lady named

Continued →

Reina, who works for a local Phoenix hospital. She also served as a Spanish translator. We cleared customs quickly and painlessly, as this group is well known by Mexican Immigration authorities.

The next leg took us over the sea of Cortez for 90-mile water crossing to land on a dirt strip called Hotel Serenedad in the town of Mulege, located on the eastern coast of Baja South. After landing, the rollout brings you to the hotel entrance and a 30-foot walk to the registration desk.



3-mile final for Mulege

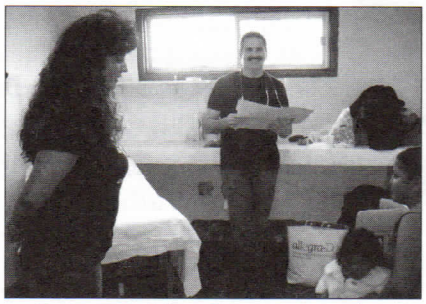
The next morning, we departed at 0800 and flew over the river and valley towards the Pacific side of Baja to another dirt landing strip in the town of Adolph Lopez Mateos. En route, we ducked under a marine layer and saw a large group of sea lions. The scenery in this part of Baja South is spectacular, with a mixture of ocean, mountains, desert, and beaches.

The clinic day is on Saturday, and between the medical, dental, chiropractic, and pediatric providers, we saw almost 200 patients. The patients lined up on Friday evening from midnight on, and they were given a number. If there are no more numbers for the type of provider needed, then they must wait one month for the next clinic day.

The clinic is located at the end of the landing strip, so it's easy access from our airplanes. Between all the medical providers, pharmacist, translators, triage nurses, pilots, and support staff, there are usually 10-15 airplanes and 30-40 participants per trip. The non-medical volunteers, such as the pilots, work on the clinic while patients are being seen. There is endless work needed and constant repairs to do.

The people we treat are grateful, respectful, kind, and most of all, have amazing patience. After waiting up to 12 hours to be seen, they still manage to smile and try to keep their spirits high.

As physicians practicing in a free clinic in Mexico, we simply do our best to provide care to the patients. Tests that we take for granted in the US are generally unavailable, or extremely difficult to obtain. We try to get along without the uses of lab, x-ray, CT/MRIs, cath labs and specialists. Some of these services are available in the larger cities but are very difficult to get for people in this remote area of Baja.



Reina and Dr. Bryman at the pediatric clinic in Mexico

Our pharmacy is stocked with generic drugs that are donated and samples of meds the providers bring. After a patient is seen, the pharmacist counts out the medication into a plastic bag and put instructions on it in Spanish. If it's an ongoing medical problem such as diabetes, then the patient follows up at the clinic in one month to see the next provider. It is the patient's responsibility to bring their chart with them. It's actually nice to just doctor patients and not worry about all the red tape and hassles we deal with on a daily basis (HIPPA, Medicare, overhead, HMOs, formularies, referrals, etc.)

Young patient at the pediatric clinic

After clinic, we flew back to Mulege. We needed to be wheels up by 4 pm, as there is no VFR night flying in Mexico. Back at the hotel, we have the famous pig roast, at the Hotel Serenedad, listen to Mexican music played by very talented local musicians, and then we spent some time at the beach around a campfire. The nights in this part of Baja are beautiful, star-filled, and peaceful.

The next morning, we flew across the sea of Cortez to Guaymas to refuel and then off to Nogales, Arizona, where we cleared US customs. On the way north, I had nice tailwind and the Warrior was in warp drive with a 140-knot ground speed.

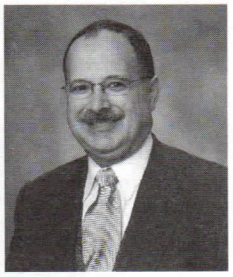
The trip and experience with the Flying Samaritans is one that my daughter and I will always remember. I would encourage any of our physician pilots to consider working as a volunteer. You will find the experience very rewarding, and have a great time in the processes.

Via con Dios, amigos, and fly safe.

FP

CAMA Welcomes New Members

Steven I. Altchuler, Ph.D., M.D.

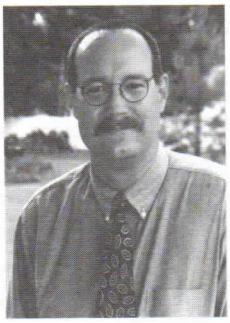


Flying and aviation have always interested me. My first flying experience was in a friend's C-172. Our high school had a WW-II link trainer, and I learned ADF navigation in it! In college, I started flying seriously, training at Hanscom Field (BED) and Deer Park during the summer (the airport is now a housing development) — great training though — the runway was just wide enough for a 172 — quite different than Bedford! I also worked summers for Grumman. The first aircraft I was assigned to work on as an engineer was the F14-A. My interests expanded, though, and following college and graduate school, I went to work for NASA at the Johnson Space Center, studying changes in calcium metabolism during space flight.

For a variety of reasons, I decided I needed to go back to medical school. I planned to continue studying calcium metabolism — but a strange thing happened halfway through my clinical rotations — I discovered that I seemed to do pretty well in psychiatry, and on top of that, enjoyed it! Leaving Texas, I came to Minnesota for residency, and was asked to stay on staff. Clinically, I specialize in addiction medicine and sleep disorder medicine. As I'm rather fond of saying, half the time I put people on high potency medications, and the other half of the time, I take them off.

I'm now settled in Rochester, Minnesota, only a few hours drive from Oshkosh. I have a busy clinical practice, and work closely with the Mayo Section of Aerospace Medicine whenever there are issues involving substance use or psychiatric illness.

Tim Bonine, M.D.



I am a new member of CAMA, and recently attended the AME seminar in Oklahoma City.

I grew up in the Northwestern US, and after graduating from high school, I served six years as a US Navy Hospital Corpsman.

I went to college on the G.I. Bill and attended the University of Nevada School of Medicine. After residency training in family practice, I served for four years as a Medical Officer in the US Air Force.

I opened a civilian practice in northern Idaho in 2002. While not yet a licensed pilot, I have enjoyed a lifelong fascination with anything related to aviation.

A veteran hang-glider and sailplane pilot, I am now beginning ground school for my private pilot certificate.

I look forward to being both a pilot advocate and serving as a source of knowledge and assistance in aviation physiology.

I am married and, along with my wife, Erin, am an impassioned advocate for children. The Bonines are foster and adoptive parents, and are the only foster home in northern Idaho specializing in the care of medically fragile foster children.

Petra A. Illig, M.D.

I first came to Alaska during medical school in the WAMI program in 1977, where I discovered my love of flying. I obtained my private pilot license by the time I graduated from the University of Washington School of Medicine in 1981. I then became board certified in Emergency Medicine and spent the next 15 years practicing in the Seattle area. Additionally, I had been an active Aviation Medical Examiner for the FAA since 1984, working out of a home office.

In 1998, I joined Delta Air Lines in Salt Lake City and became that airline's first official Flight Surgeon. In my role as Regional

Continued →

NEW MEMBERS (CONTINUED)

Medical Director of Air Crew Health Services, I dealt primarily with pilot medical and disability issues, and I also had oversight of passenger medical emergencies and developed the air-to-ground emergency medical consultation system currently in use.

In 2001, I decided to fulfill my long-standing dream of returning to Alaska and opened a private practice in aviation medicine in Anchorage. I particularly enjoy the flexibility of my work, as I am raising two active children, Peter (15) and Lena (11).

I am also an active speaker on flying and health issues in the Alaskan aviation community and am currently writing a book on airline passenger health issues. I am the past vice-president of the local 99 Chapter and am currently on the Board of Directors of the Alaska Airmen's Association. I also serve as a member of the Medical Reserve Corps.

My flying machine is a homebuilt stick-and-rudder tailwheel airplane, a Christavia MK-1. It is fun to fly. I am hoping for a good winter this year to put it on skis. Nothing like winter flying in Alaska! My favorite flight this year was a group excursion from Nome across the Bering Strait to Provideniya, Russian Far East, in a C-172.

I can be reached at:

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Charles Okorie, MD

Ever since I first flew in an airplane, I have always been intrigued by the men in the cockpit. I have always wondered what if this and what if that happens while at 30,000 feet. I have always asked the question and equally wondered about God's creation beyond the surface earth, as we know it.

Once the opportunity came to study about aerospace medicine as well as contribute in my little way to world aviation safety, I figured here comes the possibility to have at least some of my intrigues and mysteries answered. Hence, my desire to become an Aviation Medical Examiner. I am also hoping that one day, I will be able to take that knowledge and contribute to aviation safety in Nigeria, my country of birth.

I remain grateful to the FAA, the men and women of CAMA who are indeed making flying safer for all the nations of the world by the training they give to AMEs and all the attention to details I observed during my recent certification course.

Professional Data

Dr. Okorie is the Medical Director and Founder of Fair Lakes Urgent Care Center, Fairfax, VA. He has been a certified diplomate of the American Board of Internal Medicine, since September 1992. He was accepted into medical school at the age of 15 and subsequently graduated from the University of Nigeria Teaching Hospital, Enugu, Nigeria, in 1986. He completed his residency in 1992 at Howard University Hospital, Washington, DC, where he also served as Chief Resident of Internal Medicine. Dr Okorie completed one year of Clinical Fellowship in Critical Care Medicine at the University of Pittsburgh Medical Center, but he subsequently chose to concentrate on urgent care medicine, where he is able to put into good use his vast experience in the fields of critical care medicine and primary care. He also practices Internal Medicine at the urgent care facility while maintaining his critical care skills in local Intensive Care Units.

In his free time, Dr. Okorie, enjoys traveling, tennis, and surfing the Internet. To reach him directly, E-mail him at:

Charles.Okorie@flucc.com

Other New Members This Month

Matthew J. Gaspar, M.D.
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Family Practice AME

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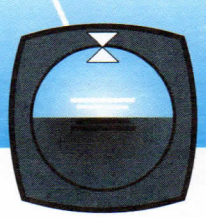
Phone: 229-883-3402
Neurosurgery Pilot AME

Andrew H. Miller, M.D.
1604 Hospital Parkway, Suite 301
Bedford, TX 76022-6931
Phone: 817-684-9985
Cardiology Pilot

R.W. Ross, M.D.
14 Gothic Ridge Road
Van Buron, AR 72950-6565
Phone: 479-474-1100
Family Practice AME

Bruce J. Witmer, M.D.
12482 Moffatt Lane
Fresno, CA 93720-9700
Phone: 559-432-5633
Orthopedic Surgery Pilot AME

On The Horizon



CAMA SUNDAY 2004

Your Civil Aviation Medical Association planning committee will present its annual "CAMA Sunday" Aviation Medical meeting in Anchorage, Alaska, Sunday May 2, 2004. This CAMA Sunday program, occurring in the Hilton Hotel, Dillingham/Katmai Room, will follow the Airline Medical Director's meeting on May 1, to which ALL CAMA MEMBERS are invited. Both meetings will occur at the same meeting site.

CAMA Sunday's program subject will be the AGE 60 PILOT and a SPECTACTULAR group of speakers will be presenting.

Make your plans NOW to:

- √ Be at Aerospace in Anchorage May 1-7, 2004
- √ Attend the Airline Medical Directors meeting, Saturday, May 1
- √ Attend CAMA Sunday, May 2
- √ Stay for the CAMA luncheon, May 3
- √ Enjoy AsMA and Anchorage
- √ Bring your salmon fishing gear

CAMA Headquarters
P.O. Box 23864
Oklahoma City, OK 73123-2864

October 6 - 10, 2004
We are meeting in
Omaha, Nebraska
Make plans to attend

FAA AVIATION MEDICAL EXAMINER SEMINAR SCHEDULE

2004

March 15-19	Oklahoma City, Okla.		Basic
April 23-25	Dallas, Texas		Aviation Physiology/HF
May 3-6	Anchorage, Alaska (AsMA)		Cardio
June 21-25	Oklahoma City, Okla.		Basic
July 9-11	Denver, Colo.		Aviation Physiology/HF
August 6-8	McLean, Va.		Ophth/Otolaryn/Endocrin
September 13-17	Oklahoma City, Okla.		Basic
November 5-7	Tampa/Ft. Lauderdale, Fla., area		Neuro/ Psychol/Phy
November 15-19	Oklahoma City, Okla.		Basic

For information, call your regional flight surgeon. To schedule a seminar, call the FAA Civil Aerospace Medical Institute AME Programs Office (405) 954-4830

AEROSPACE MEDICAL ASSOCIATION'S ANNUAL MEETING SCHEDULE

May 2 – 6, 2004	Anchorage, Alaska
May 8 – 12, 2005	Kansas City, Missouri

CIVIL AVIATION MEDICAL ASSOCIATION'S ANNUAL MEETING SCHEDULE

October 6 – 10, 2004	Omaha, Nebraska, Marriott Omaha Hotel
October 5 – 9 , 2005	Charleston, South Carolina, TBA
October 4 - 8, 2006	Ottawa, Canada, Ottawa Marriott Hotel

Visit CAMA's Web Site
www.civilavmed.com